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**Report to the Federal Communications Commission on Carrier Efforts Toward Attaining Digital TTY Accessibility, and the Status of the Various Technological Solutions, as Provided by CC Docket No. 94-102, In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems**

RSA 1 Limited Partnership d/b/a Cellular 29 Plus ("Cellular 29"), by its attorneys, pursuant to the Federal Communications Commission's ("Commission") *Fourth Report and Order* in CC Docket No. 94-102,<sup>1</sup> hereby files a Quarterly Report for the quarter ending June 30, 2002, reporting that Cellular 29's digital wireless network is capable of transmitting 911 calls using text telephone ("TTY") devices, and as such, Cellular 29 is compliant with Commission Rule 20.18(c).

In the *Fourth Report and Order* the Commission established December 31, 2001 as the new deadline for carriers operating digital wireless systems to have obtained all software upgrades and equipment necessary to make their systems capable of transmitting 911 calls from TTY devices. It further established June 30, 2002 as the deadline for carriers to integrate, test and deploy the technology in their systems in conjunction with the public safety community. In order to be assured that the aforementioned deadlines will be met without complication, the Commission required digital wireless carriers to submit Quarterly Reports fifteen days after the end of each quarter.<sup>2</sup> Until the first quarter of 2002, Cellular 29 exclusively provided AMPS service in its service area, and therefore, compliance with the December 31, 2001 deadline was not applicable to Cellular 29. Nonetheless, in anticipation of its deployment of CDMA technology, Cellular 29 filed Quarterly Reports with the Commission.<sup>3</sup> Cellular 29 now files this instant report with the Commission.

**I. Carrier Background**

Cellular 29 provides analog and on March 20, 2002, deployed digital CMRS wireless service in the Iowa 1 - Mills RSA.<sup>4</sup> Cellular 29 did not provide digital commercial service until

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<sup>1</sup>In the Matter of Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Fourth Report and Order*, CC Docket No. 94-102, 15 FCC Rcd 25216, 65 Fed. Reg. 82293 (December 28, 2000), ("*Fourth Report and Order*").

<sup>2</sup>*Id.*

<sup>3</sup> Before its digital deployment during the first quarter of 2002, Cellular 29 filed three quarterly reports with the Commission. (April 15, 2001, July 15, 2001, and October 15, 2001.) Cellular 29 filed a report with the Commission after its digital deployment. (April 15, 2002.)

<sup>4</sup>Station KNKN649 (CMA412B).

the first quarter of 2002, and specifically, not until after it transitioned to its new Lucent Technologies, Inc. (“Lucent”) host switch, owned by Hawkeye Switching, LLC, and located in Stanton, Iowa. During the second quarter of 2002, Lucent installed the Lucent TTY feature for CDMA cellular infrastructure on the Cellular 29 host switch of the same type and standard as the TTY feature that Lucent had field-tested and approved prior to June 30, 2002.<sup>5</sup> Based on this install, Cellular 29’s digital network is compliant with Commission Rule 20.18(c).

## **II. Access to 911 Through TTY Devices**

Cellular 29’s wireless network infrastructure is supported by a host switch that uses analog AMPS and CDMA equipment provided by Lucent. Before Cellular 29 began offering digital service, Lucent advised Cellular 29 that although the Lucent software necessary to implement TTY over digital would not be installed on Cellular 29’s host switch to allow TTY compatibility with the March 20, 2002 CDMA deployment, the Lucent host switch itself would be compatible with the necessary TTY compatibility software when Cellular 29 deployed CDMA on its network. During the second quarter of 2002, the Lucent TTY feature was activated in Cellular 29’s host switch. Lucent’s publicly released confirmation of TTY 911 functionality of its equipment is appended hereto as **Exhibit A**. Cellular 29 is not capable of independently verifying the information presented therein, but has no reason to believe it is not accurate, particularly since the digital TTY compatibility requirement is a function of compatible network hardware and software and handsets. If a particular configuration works in one deployment for a particular vendor’s infrastructure, it should work equally well in any other deployment. Since the requisite Lucent TTY equipment supporting Cellular 29’s network is of the same type and standard as the equipment Lucent field-tested and approved, Cellular 29’s digital network is compliant with Commission Rule 20.18(c).

The primary handset provider to Cellular 29 is Motorola. Cellular 29 has not yet had access to any TTY-capable handsets but it requested information on its progress in releasing commercially available TTY-compatible CDMA handsets. Motorola’s response is appended hereto as **Exhibit B**. Cellular 29 is not capable of independently verifying the information presented therein, but has no reason to believe it is not accurate.

The appended Lucent and Motorola information is respectfully submitted in response to these issues, as required in the Commission’s *Fourth Report and Order* (rel. Dec 14, 2000).

### **A. Development Activities**

- (1) *Network Infrastructure Software Development*
- (2) *Handset Development and Testing Plans*
- (3) *Beta Testing and Lab Testing*
- (4) *Release and General Availability to Carriers of Network Infrastructure Software*
- (5) *Availability to Carriers of Full Acceptance Test Units*

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<sup>5</sup> See *infra*, Lucent CDMA TTY/TDD Regulatory FAQ/RFI, app.

(6) *Efforts Toward Achieving Digital Wireless Solution Compatibility With Enhanced TTY Devices*

Cellular 29 has been advised that its digital system, as presently operating, meets the FCC's requirements to support TTY devices.

**B. Testing and Deployment Activities**

Cellular 29 has not had access to TTY-compliant CDMA handsets. With regard to item number 7 however, Cellular 29 has communicated with its various local Public Safety Answering Points ("PSAP") to advise them that Cellular 29's digital network supports TTY calls made using a TTY-compatible CDMA handset. Cellular 29 is not responsible for, nor has any control over, the public safety community obtaining digital TTY-compatible equipment. Nonetheless, Cellular 29 has made its local PSAPs aware that the TTY Forum (through ATIS) offers a diagnostic test to determine if a PSAP's equipment is digital TTY-compatible.<sup>6</sup> With respect to item number 8, Lucent has successfully conducted all necessary testing of Cellular 29's host switch, to the extent that the host switch is of the same type and standard as the TTY feature that Lucent had field-tested and approved prior to June 30, 2002. Cellular 29 has requested information from Motorola with respect to item 9; Motorola's response is appended hereto at **Exhibit B**. With respect to item 10, TTY compatibility is available throughout all portions of the Cellular 29 network where digital CDMA has been deployed.

- (7) *Carrier Coordination of Testing With PSAP*
- (8) *Carrier Testing Activities, Including Field Testing, Consumer End-to-end Testing, and Other Necessary Tests*
- (9) *Retail Availability of Necessary Consumer Equipment*
- (10) *Geographic Scope of Network Infrastructure Deployment*

**III. Conclusion**

During the second quarter of 2002, Lucent installed and enabled its TTY feature for CDMA cellular infrastructure on Cellular 29's TTY-capable host-switch. Based on this installation, Cellular 29 is in compliance with Commission Rule 20.18 (c) to make its systems capable of transmitting 911 calls from TTY devices by June 30, 2002. Accordingly, no further quarterly reports will be filed by Cellular 29.

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<sup>6</sup> The diagnostic test can be found on the Alliance for Telecommunications Industry Solutions ("ATIS") webpage, [www.atis.org](http://www.atis.org), at TWIP (TTY Wireless Inter-Operability with PSAP TTY) Test, last checked on July 8, 2002.

Respectfully Submitted,

RSA 1 Limited Partnership d/b/a  
Cellular 29 Plus

Dated: July 15, 2002

/S/ Anna E. Ward

Michael K. Kurtis  
Anna E. Ward

*Its Attorneys*

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## **EXHIBIT A**

March 29, 2002

**CDMA TTY/TDD Regulatory FAQ/RFI**



*March 27th, 2002*

Re: Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911  
Emergency Calling Systems, CC Docket 94-102, TTY Compatibility with Digital Wireless Systems

Lucent Technologies Inc. is happy to announce that TTY/TTD for CDMA and TDMA is now generally available (GA).

TTY/TTD for CDMA and TDMA have field-tested and now FOA complete. The TDMA version of feature was tested in May 2001 in Telecorp Little Rock, Arkansas market. The CDMA version of feature was tested in October 2001 in Verizon Jersey City NJ Market.

Lucent is proud of this great development for TTY solutions. If you have any questions, please contact me at (630) 979-8845.

Sincerely,

Curtis A Miller  
Sr Mgr Network Product Mgmt

## **EXHIBIT B**

## MOTOROLA TTY COMPATIBILITY DEVELOPMENT STATUS REPORT 2nd Quarter 2002

| Product             | Standard                            | Status             | Milestones   | Progress   |
|---------------------|-------------------------------------|--------------------|--|--|
| CDMA Handset        | IS 127-3<br>IS 733-2                | Carrier deployment | IOT: June 2001<br>UI: October 2001<br>ROM: December 2001<br>SA: May 2002         | Handset development work complete. V60i and V120c CDMA phones have been approved for shipment.                                       |
| GSM Handset         | TS 26.226<br>TS 26.230<br>TR 26.231 | Carrier deployment | UI: October 2001<br>IOT: October 2001<br>ROM: January 2002<br>SA: July 2002      | Handset development work complete. V60i GSM phone has been approved for shipment. P280i expected to be approved for shipment in July |
| iDEN Handset        |                                     | Carrier deployment | Production handsets available to carriers.                                       | Handset work complete.   |
| TDMA Handset        | IS 823-A<br>IS 840-A                | Carrier deployment | IOT: September 2001<br>UI: September 2001<br>ROM: October 2001<br>SA: April 2002 | Handset development work complete. V60i and V120t TDMA phone has been approved for shipment.   |
| CDMA Infrastructure | IS 127-3<br>IS 733-2                | Carrier deployment | FOA Jan 02<br>Software release available   | Carrier testing complete.  |
| iDEN Infrastructure |                                     | Carrier deployment | Production software available to carriers  | Infrastructure software available for carrier deployment.  |

Note: Motorola works with its carrier customers to provide them specific information related to their respective products.

Note: IOT is Inter Op Testing with RAM based parts for Character Error Rate testing  
UI is User Interface testing with HCO / VCO support  
ROM is the availability of ROM based phones. These should be functionally identical to a RAM phone.  
SA is Ship Acceptance of production volume quantities

Rex Ellington  
Product Safety & Compliance  
Motorola – Personal Communications Sector  
Phone: 815-884-4315



CERTIFICATE OF SERVICE

I, LaWanda Y. Tyson, a secretary with the law firm of Kurtis & Associates, P.C., do hereby certify that I have this 15<sup>th</sup> day of July 2002, filed the foregoing “REPORT TO THE FEDERAL COMMUNICATIONS COMMISSION ON CARRIER EFFORTS TOWARD ATTAINING DIGITAL TTY ACCESSIBILITY, AND THE STATUS OF THE VARIOUS TECHNOLOGICAL SOLUTIONS, AS PROVIDED BY CC DOCKET NO. 94-102, IN THE MATTER OF REVISION OF THE COMMISSION’S RULES TO ENSURE COMPATIBILITY WITH ENHANCED 911 EMERGENCY CALLING SYSTEMS” electronically with the Federal Communications Commission’s Electronic Comment Filing System. I have also filed a copy of this report with the Federal Communications Commission’s copy contractor, Qualex International. In addition, a copy of this report has been provided to Melinda Littell of the Commission’s Wireless Telecommunications Bureau.

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/S/ LaWanda Y. Tyson  
LaWanda Y. Tyson